



June 29, 2012

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: Notice of Ex Parte Presentations in WT Docket 11-186 and ET Docket 03-137

Dear Ms. Dortch:

On June 27, 2012, the following personnel from Pong Research Corporation (“Pong”)— Kevin Passarello (Executive Vice President and General Counsel); Ryan McCaughey, PhD (Chief Technology Officer); and Doron Gorshein (consultant to Pong)—had separate meetings with the following Federal Communications Commission (“Commission”) personnel: (a) first, with Office of Engineering and Technology personnel Bruce Romano, Robert Weller, and Ed Mantiply and (participating via video conference) Rashmi Doshi, Kwok Chan, and William Hurst; and (b) second, with Louis Peraertz, wireless advisor to Commissioner Clyburn. At each of the meetings, the Pong representatives reviewed Pong’s filing dated May 31, 2012 in WT 11-186, and Pong’s filing dated June 24, 2012 in ET 03-137.

In particular, wireless device cases can substantially impact wireless device transmission and reception (including Total Radiated Power (“TRP”)) and battery life, as well as Specific Absorption Rate (“SAR”) and, potentially, overall network efficiency. In its prior filings, Pong detailed some of these impacts. Consumers are generally unaware of these effects from cases.

Pong’s wireless device cases are the only products commercially available that have been proven in Commission-certified laboratories to reduce user exposure to cell phone radiation, as measured on the SAR scale, while maintaining TRP. Most mobile phone and tablet users today use cases for their devices. Aftermarket, form-fitting cases are not tested in the device equipment authorization process—but have become as integral to (and functionally are as much as part of) devices as original equipment manufacturer “shells.” The resultant “radiation profile” of a given device with a case may bear little resemblance to that of the same device without a case, as tested in the equipment authorization process. This altered profile, as well, might dramatically increase SAR and decrease TRP.

Bulletin 65 intended to effect a testing regime (for the equipment authorization process) that replicates consumers’ actual experiences and behaviors vis-à-vis portable devices, and so states:

*For purposes of evaluating compliance with localized SAR guidelines, portable devices should be tested or evaluated **based on normal operating positions or conditions.***¹

In Bulletin 65, the Commission recognized that, to simulate *normal operating positions or conditions*,

¹ *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, edition 97-01, August 1997, at page 42 (emphasis added), http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf.

testing should likewise account for the presence of device accessories. Supplement C to Bulletin 65² states:

*Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device.*³

Bulletin 65 also stipulated cautionary statements in user manuals: specifically to the effect that **certain accessories may cause the portable device to exceed the Commission's RF compliance requirements**. Bulletin 65 provided that “[i]n order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and caution statements should be included in the manual. The information should allow users to make informed decisions on the type of body-worn accessories and operating configurations that are appropriate for the device.”⁴ Bulletin 65 further provided specific examples of such statements, including a statement that use of certain accessories “**may not ensure compliance with FCC RF exposure guidelines**.”⁵ The Commission further expressly acknowledged that the presence of accessories (like holsters and belt clips) will “*affect the SAR produced by the transmitting device*.”⁶

Thus, in Schedule C, the Commission correctly concluded that: (1) testing of portable devices should simulate normal operating positions or conditions; (2) testing should thus be conducted in the presence of accessories; (3) accessories impact SAR; and (4) caution statements should be provided in the manuals for portable devices, informing consumers that use of certain accessories “may not ensure compliance with FCC RF exposure guidelines.” The Commission reached these conclusions before the mass proliferation of smartphones, tablets, and wireless device cases, although the Commission expressly addressed accessories such as belt clips and holders that were prevalent at the time.

Furthermore, the Commission intended its testing guidelines to ensure that consumers are both protected and informed. From the perspective of promoting consumer interest, therefore, **Bulletin 65 anticipated that consumers might procure accessories like belt clips and holsters not only from original equipment manufacturers (“OEMs”) but also in the aftermarket.** (From the consumer’s perspective, the source of these products makes little difference.) Although no meaningful aftermarket for accessories such as cases existed in 2001, **the Commission indicated that caution statements should be provided, even when non-OEM accessories are used with the device.**⁷ Among its prescribed caution statements, the Commission recommended the following:

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with the (manufacturer name) accessories supplied or designated for this product. *Use of other accessories may not ensure compliance with FCC RF exposure guidelines.*⁸

And, again:

² *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, Supplement C (Edition 01-01) to Bulletin 65 (“Supplement C”), June 2001, http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65c.pdf.

³ *Id.*, at 41, emphasis added.

⁴ *Id.*

⁵ *Id.*

⁶ Supplement C states: “Both the physical spacing to the body of the user as dictated by the accessory and the materials used in an accessory affect the SAR produced by the transmitting device.” *Id.*

⁷ *Id.*

⁸ *Id.*, emphasis added.

For body worn operation, this phone has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of (specified distance) from the body. *Use of other accessories may not ensure compliance with FCC RF exposure guidelines.*⁹

The Commission so confirmed that testing should account for the presence of accessories, whether or not those accessories are provided by the manufacturer of the device.¹⁰ In this regard, it is important to note that the so-called “attachment rate” (i.e., that rate at which consumers purchase) for cases at device point of sale, is at least 0.5X, so that a majority of accessories are sold together in the same transaction with the wireless devices themselves.¹¹

Furthermore, given what we know today, at least one guideline in Bulletin 65 that accounts for accessories that are not provided by the manufacturer—i.e., to test with a separation distance of 1.5 cm to 2.5 cm for body worn operation and in certain fixed positions for head proximity—may no longer adequately protects consumers. This state of affairs exists because, among other reasons, consumers do not typically keep their devices 1.5 cm to 2.5 cm from their bodies or in fixed positions relative to their heads, but rather against their bodies and heads; (2) portable devices are smaller and slimmer than 10-15 years ago, and typically are pressed against the body under normal use, even when a case is present; (3) cases themselves can and do impact SAR, as the Commission has acknowledged; and (4) the need to test with accessories should be guided by impact on the consumer, rather than by the accessory’s source. In the meetings, the Pong representatives also noted that testing with the device at least 15 mm away from the person (for body worn configuration) does not accurately reflect true SAR. For some wireless devices, SAR—if measured when the device is used directly against the body—might exceed the Commission’s safety standard of 1.6 W/kg. The presence of some cases could exacerbate this effect.

Pong suggested the following as potential steps:

1. The Commission should update its testing guidelines more accurately to reflect predominant consumer behavior. This update should incorporate testing guidelines that include the presence of a case, which would more accurately determine (among other things) “real SAR,” especially since most consumers use cases. The Commission should extend its guidelines, which already apply to other body-worn accessories such as belt clips and holsters, to cases. Doing so would not be unduly burdensome but, rather, could be readily implemented consistent with best practices already in place. The Commission possesses and should exercise the authority to promulgate testing guidelines that simulate actual consumer use of portable devices. In our view, the integrity and accuracy of the testing regime—which is designed to ensure that products are tested based on normal operating positions or conditions in order best to protect consumers—cannot be safeguarded without accounting for the presence of a case, which is how most consumers use devices. The determination of how such a process could be implemented ultimately rests with the Commission.
2. Bulletin 65 already includes guidelines for caution statements, which are expressly applicable to

⁹ *Id.*, emphasis added.

¹⁰ Supplement C at page. 41, which states: “*Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.*”

¹¹ Source: ABI Research.

accessories such as belt clips and holsters. These guidelines should be extended to cases as well. Thus, in order to allow consumers to make informed decisions—and consistent with Bulletin 65—the Commission should establish appropriate guidelines for the inclusion of caution statements in the manuals for each portable device, informing consumers that use of certain *cases* “may not ensure compliance with FCC RF exposure guidelines”—the very warning that the Commission now recommends for belt-clips, holsters, and other body-worn accessories.

3. To properly protect consumers, testing guidelines should be updated to reflect use of devices directly against the body. Most consumers hold their devices against their bodies and heads. For example a space of at least 15 mm in the case of body worn configuration dramatically impacts SAR, but that is not how consumers typically use devices. Modern habits tend towards much closer proximities, as well as longer exposures.

4. The Commission should include within its review of wireless service quality (including in its annual inquiry as to the status of competition in mobile wireless), or in a separate inquiry, an assessment of the impact that cases have on consumers’ experiences of wireless network service quality, as well as, potentially, their health and safety. With respect to wireless service quality, factors such as reception quality, battery life, and network efficiency should be examined. In the interim, the Commission could, via its web site, inform consumers that standard mobile device cases may reduce transmission and reception quality and increase RF radiation absorption, so that consumers should thoroughly research and compare products before selecting cases for their wireless devices.

Sincerely,



Kevin L. Passarello

EVP Business Development and General Counsel
Pong Research Corporation

cc: Doron Gorshein
Shannon R. Kennedy, PhD
Ryan McCaughey, PhD
Rong Wang, PhD